



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,298	05/17/2005	Mark Jozef Willem Mertens	NL 021458	5801
24737 7590 04/03/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
LEE, PING				
ART UNIT		PAPER NUMBER		
2614				
MAIL DATE		DELIVERY MODE		
04/03/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/535,298

**Applicant(s)**

MERTENS ET AL.

**Examiner**

Ping Lee

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In view of the Interim Guidelines, the prosecution is reopened. Examiner apologizes for the delay.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 9 and 10 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit decisions<sup>2</sup> indicate that a statutory "process under 35 U.S.C. 101 must (1) be tie to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim(s) neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example, an audio signal is being processed, and first and second positionless data signals are mapped. However, the claim(s) does not change the audio signal or the first or the second positionless data signal to a different state or thing. The claim(s) specifies steps to process audio signal or mapping the first and

---

<sup>1</sup> Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876).

<sup>2</sup> In re Bilski, 88 USPQ2d 1385 (Fed. Cir. 2008).

second positionless data signal. However, no particular apparatus is being specified to perform the steps.

4. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim specifies "a computer-readable medium". However, the specification as originally filed discloses that the computer-readable medium may be realized as data stored on a data carrier (p. 1 and p. 13) or transmitted over a signal transmission system (p. 13). Such disclosure of the computer program product does not enable the claimed "a computer-readable medium" falling within the statutory classes of invention.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orbanes et al (hereafter Orbanes) (US 6,785,667).

Regarding claims 1 and 8-10, Orbanes discloses a data representation apparatus for representing data (scene or environment, or how close to the object) by means of an audio signal. In one embodiment, Orbanes teaches that the system would respond to voice commands (reads on the claimed positionless data, with different commands correspond to the first value and the second value). See col. 37, lines 60-64. In another embodiment, Orbanes teaches that the audible sound is generated by mapping a first action (for example, zoom in) to a first position in a three-dimensional

space, and the second action to a second position (col. 38, lines 6-8) and the audio processing unit changes the characteristic of the audio signal (col. 38, lines 2-15). However, Orbanes fails to show that the two embodiments could be combined together. Based on Orbanes' teaching regarding the directional control in response to the voice recognition (col. 37, lines 60-64), one skilled in the art would have expected that the same benefit could be applied to the sound effect simulating the virtual environment by controlling the zooming function using the voice commands. Using the voice commands, the user's hand would be free from the keyboard, mouse or other hand-related input device. Thus, it would have been obvious to one of ordinary skill in the art to modify Orbanes by utilizing the voice recognition capability to control the sound effect simulating the virtual environment in order to free the user's hand from the input device.

Regarding claim 3, the claimed measurement device reads on microphone.

Regarding claim 4, the example provided on col. 38 is a street in a city, wherein the street has a predetermined region in a three-dimensional space, the voice commands would be mapped to the space.

Regarding claim 5, depending on how the user controls the direction (such as pan left, pan right, zoom in, zoom right), the positionless data signal would be mapped on a curvilinear locus in three-dimensional space.

Regarding claim 6, the claimed specification means reads on the user input selection, and the claimed preferred mapping reads on the preferred street to be viewed.

Regarding claim 7, the claimed selection means reads on the means allowing the user to select different map area, the first type of the audio signal represents the audio in the first area, and the second type of the audio signal represents the audio in the second area.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orbanes as applied to claim 1 above, and further in view of Courneau et al (hereafter Courneau) (US 5,987,142).

Regarding claim 2, Orbanes fails to show that a filter applying a HRTF to the input audio signal to obtain the output audio signal appearing to originate from the first position to the second position. Orbanes teaches in general that the reproduced sound would simulate the virtual environment. However, no specific sound processing algorithm is being disclosed. One skilled in the art would be motivated to search the art related to virtual sound simulation for appropriate sound processing algorithm. Adjusting sound volume alone would not generate sound that simulates a realistic virtual environment. Courneau teaches that the HRTF is being used to simulate the virtual sound environment. HRTFs are functions describing the delay, the frequency response and the amplitude response of the sound at the two ear drums of the user in real time. Thus, it would have been obvious to one of ordinary skill in the art to modify Orbanes in view of Courneau by using a filter as a function of HRTF to generate audio signal in order to simulate a more realistic sound effect in a virtual environment.

***Response to Arguments***

8. Applicant's arguments filed 2/3/09 have been fully considered but they are not persuasive.

On p. 14, applicant stated that it is unclear Orbanes discloses a data representation apparatus for representing data by means of an audio signal. This is not persuasive. Data, according to Webster's Ninth New Collegiate Dictionary, means factual information used as a basis for reasoning, discussion or calculation. The claimed data could reads on factual information represented by a map in Orbanes. Orbanes' system not only can display the regular map (with street and icon), it can also supplement the map scene with audio information related to the displayed map. What kind of audio information is going to be generated? Orbanes teaches that it depends on the voice commands (reads on the claimed positionless data signal having at least a first value and a second value).

On p. 15, applicant stated that Orbanes fails to disclose the claimed "a mapping unit for mapping the first value of the positionless data signal to a first position in three-dimensional space, and the second value of the positionless data signal to a second position in three-dimensional space". Examiner does not agree. As cited on col. 38, lines 1-15, Orbanes' device simulates the virtual three-dimensional effect of a street scene. By using voice commands (reads on the claimed positionless data signal), Orbanes' device would display the street scene with different depth (zoom in or zoom out reads on the claimed positionless data signal having a first value or a second value) or different angle (pan left or pan right reads on the claimed positionless data signal

having a first value or a second value). Every audio signal generated is related to the voice commands (reads on the claimed positionless data signal), thus defining the virtual three-dimensional effect of a street scene.

On p. 18, applicant argued that there is no motivation or incentive for combining Orbanes with Courneau. This is not convincing. Orbanes' invention uses audio signal to aid the simulation of virtual three-dimensional effect of a street scene. Applicant alleged that the audio signal would detract the user's attention from the display scene. This allegation completely ignore what has been taught in Orbanes. Examiner agrees that Orbanes' device displays visual information on a monitor. Orbanes' device also generates sound. Applicant cannot ignore the fact that Orbanes' device uses sound and visual clues to simulate the street scene depth.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Wednesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ping Lee/  
Primary Examiner, Art Unit 2614

pwl